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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,044	10/28/2003	Mu-Hyun Kim	1514.1034	3882

49455 7590 10/13/2005

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WASHINGTON, DC 20005

EXAMINER
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GARRETT, DAWN L

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 10/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/694,044

Applicant(s)

KIM ET AL.

Examiner

Dawn Garrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 12-23 and 27-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 24-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

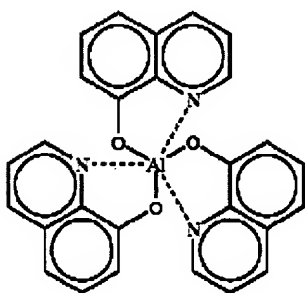
**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/28/03; 7/29/05</u> | 6) <input type="checkbox"/> Other: _____  |

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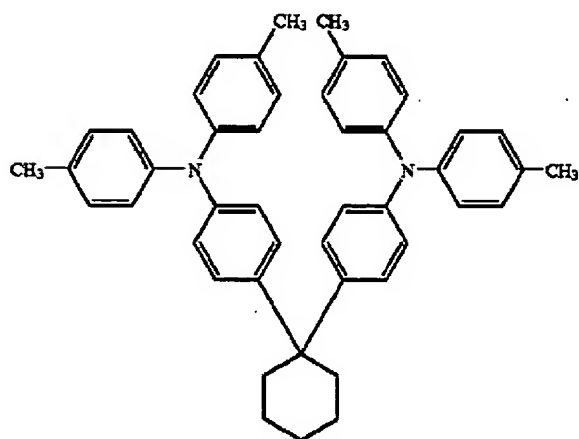
**DETAILED ACTION**

1. This Office action is responsive to applicant's response to the election and restriction requirement received July 29, 2055. Applicant chose Group I, claims 1-11 and 24-26. With regard to the election of species requirements, applicant elected Formula I for the low molecular weight organic electroluminescent material (shown in claim 3)



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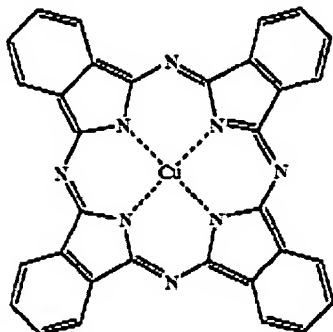
Formula 14 for the hole transmitting layer material (shown in claim 5)



;

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Formula 19 for the hole injecting material (shown in claim 6)



1, 3,4 -oxadiazole derivative for the electron injecting layer material (shown in claim 7); and TAZ for the hole blocking material (claim 8). The examiner is withdrawing the requirement for an election of a substrate film material species. Claims 12-23 and 27-29 are withdrawn as non-elected.

2. The examiner maintains the restriction requirement is proper, because the articles may be formed by a method other than laser irradiation. Furthermore, the method of making an EL device and EL device and donor films have acquired a separate status in the art as evidenced by their different classification. With regard to the election of species requirement, applicants appear to argue that the species are not patentably distinct. If such is the case, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or *clearly admit* on the record that this was intended, and the election requirement will be withdrawn. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission *may be used in a rejection under 35 U.S.C. 103(a)* of the other invention.

***Claim Objections***

3. Claims 1 and 3 are objected to because of the following informalities:
- a. In claim 1, “A donor film of a low” should be changed to “A donor film for a low” in the first line of the claim.
  - b. In claim 1, the second line, “dornor” is misspelled and should be changed to “donor”.
  - c. In the last line of claim 1, “the substrate” should be changed to “the substrate of the organic electroluminescent display device” for clarity.
  - d. In claim 3, Formula 12, “ir” should be changed to “Ir” in the structural formula.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

5. Claims 5, 7, and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claim 5 recites “hole **transmitting** layer”; however, claim 4 upon which claim 5 depends recites “hole **injection** layer” and “hole **transporting** layer”, but does not recite a “transmitting layer”. As written, claim 5 is indefinite because claim 4 does not recite a hole transmitting layer. Clarification and/or correction are required.

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7. Claim 7 recites an “electron injecting layer”, but claim 4 upon which claim 7 depends recites only an electron transporting layer. As written, claim 7 is indefinite because claim 4 does not recite an electron injecting layer. Clarification and/or correction are required.

8. Claim 8 is unclear for reciting “TAZ, spiro-TAZ, compound represented by at least one of the following Formulas 24 to 26:”. None of the Formulas 24 to 26 appear to be TAZ or TAZ derivatives. It appears there is a missing “and” in the claim. Clarification and/or correction are required to more clearly define the Markush group for the hole blocking layer material.

***Claim Rejections - 35 USC § 102 and 103***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-5, 7-11 and 24-26 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kwon et al. (EP 0 851 714). Kwon et al. disclose a donor film for an organic electroluminescence device comprising a base film (substrate film), a light-absorbing layer (photothermal conversion layer) and a transfer layer formed of a luminous material (see abstract). All of the adhesion properties set forth in claim 1 are considered to be inherent to the donor film. One purpose of a donor film is to adhere better

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to the substrate onto which it is transferred as compared to the substrate it is leaving. The process limitations in claim 1 are not significant, because the product, a donor film, is being claimed.

Kwon et al. discloses formula (1) for the transfer layer, which is identical to formula 1 of claim 3 with regard to the low molecular weight organic electroluminescent material (see page 4, lines 21-35). The transfer layer may further comprise hole transfer material and electron transfer material per claim 4 (see abstract). The hole transfer material may include formula (8), which is identical to Formula 14 of claim 5 (see page 6, lines 25-43). Kwon et al. further discloses 1, 3, 4-oxadiazole derivative as an electron transfer material per claim 7 (see page 6, lines 20-24). In addition, Kwon et al. discloses TAZ per claim 8 (see page 6, lines 20-24). The light absorbing layer (photothermal layer) is comprised of polymer containing carbon black, graphite or infrared absorbing dye (see page 4, lines 8-10) per claims 9 and 10. The base film (substrate film) is comprised of any transparent polymer including polyesters (see col. 4, lines 4-7). Kwon et al. further discloses a gas generating layer (see claim 15, page 18) with regard to claim 26. Kwon et al. is deemed to be sufficient to anticipate the claims; however, in the alternative that Kwon et al. is not considered to be sufficient to anticipate these claims and their recited properties, it would have been obvious to one of ordinary skill in the art at the time of the invention to have formed a device comprising all the recited components, because Kwon et al. teaches all the materials to form such a device.

11. Claims 1-4, 6-9, 11, 24 and 25 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Akai (US 2003/0045021). Akai discloses transfer donor films for organic electroluminescent devices (see abstract and par. 82). The donor film comprises a base film formed of a polymer such as PET (see par 84) and an

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organic film (see par. 87). The organic film (transfer layer) comprises multiple layers (see par. 87-89). One of those layers of the organic film may be a light emitting layer comprising Alq3 per Formula 1 of claim 3 (see par. 93). A further layer may comprise the following materials: CuPc (per claim 6), oxadiazole compounds (per claim 7), and triazole derivatives (per claim 8) (see par. 95 and 96). A light to heat conversion layer is formed on the base film per the photothermal film (see par. 86). Akai is deemed to be sufficient to anticipate the claims; however, in the alternative that Akai is not considered to be sufficient to anticipate these claims and their recited properties, it would have been obvious to one of ordinary skill in the art at the time of the invention to have formed a device comprising all the recited components, because Akai teaches all the materials to form such a device.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571)272-1523. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached at (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dawn Garrett  
Primary Examiner  
Art Unit 1774

October 5, 2005